



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/603,585	06/26/2000	Scott R. Brundage	005950-544	3095

7590

07/30/2003

E Joseph Gess Esq  
Burns Doane Swecker & Mathis LLP  
P O Box 1404  
Alexandria, VA 22313-1404

EXAMINER

MCAVOY, ELLEN M

ART UNIT

PAPER NUMBER

1764

DATE MAILED: 07/30/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 13

Application Number: 09/603,585  
Filing Date: June 26, 2000  
Appellant(s): BRUNDAGE ET AL.

---

E. Joseph Gess  
For Appellant

**EXAMINER'S ANSWER**

**MAILED**

JUL 3 0 2003

**GROUP 1700**

This is in response to the appeal brief filed 26 June 2003.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3)     *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4)     *Status of Amendments After Final***

No amendment after final has been filed.

**(5)     *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6)     *Issues***

The appellants' statement of the issues in the brief is substantially correct. The changes are as follows: Issue 2, the rejection of claims 1-19, 23-35 and 39-51 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of copending Application No. 09/603,556 has been rendered moot in view of the abandonment of 09/603,556 in January 2003.

**(7)     *Grouping of Claims***

Appellants' brief includes a statement that claims 1, 2, 4, 6, 8, 10, 12-19, 23-35 and 39-51 should be considered separately from claims 3, 5, 7, 9, and 11 and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

5,288,393	JESSUP et al	2-1994
5,593,567	JESSUP et al	1-1997
5,653,866	JESSUP et al	8-1997
5,837,126	JESSUP et al	11-1998

**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-19, 23-35 and 39-51 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the Jessup et al references in view of the CARB Properties and Specifications for Phase 3 Reformulated Gasoline set forth in the specification on page 7.

The Jessup references teach that by controlling one or more properties of a gasoline fuel suitable for combustion in automobiles, the emissions of NO<sub>x</sub>, CO and/or hydrocarbons can be reduced. The gasoline properties which can be controlled include Reid Vapor Pressure, the 50% and 90% D-86 distillation points, olefin content, paraffin content, octane number and aromatic content. Specifically, a Reid Vapor Pressure max. range of 9.0-15.0 psi is set forth in Table 1 in col. 5 of Jessup '393. The prior art references teach that a less polluting gasoline fuel can easily be prepared in a petroleum refinery by blending the hydrocarbon stocks so as to produce

Art Unit: 1764

gasolines of specified Reid Vapor Pressure, olefin content, etc., in light of the mathematical equations provided by Jessup such that the amount of pollutants emitted upon combustion are reduced. The equations for carbon monoxide (CO) in gm/mile, NO<sub>x</sub> in gm/mile and hydrocarbons (HC) in gram/mile are set forth in col. 5. The examiner is of the position that the method of claim 1 of blending unleaded gasoline fuels which are substantially free of ether compounds and which have a Reid vapor pressure of 7-15 psi comprising the steps of blending and controlling gasoline blending streams such that the blended unleaded gasoline products are in compliance with a California Predictive Model such as the Phase 2 and Phase 3 Models is encompassed by the Jessup references. Although Jessup does not teach gasolines essentially free of ether compounds as required by the claims, Jessup '393 includes examples of gasoline blends in Table 2 wherein several blends include 0.0 volume % of the oxygenate MTBE. The examiner is of the position that the blends in this table having Reid Vapor Pressure valued between about 7.0 and 15.0 and having 0.0 volume % MTBE are the closest prior art gasoline blends which meet the limitations of the claims. And, although Jessup does not teach the sulfur content of the gasoline streams, it would have been obvious to the skilled gasoline formulator to limit the amount of sulfur to the levels now required for all gasolines sold in California, that of an average limit of 15 ppmw. As set forth in the specification, The California Phase 3 Predictive Model is comprised of 12 mathematical equations which estimate the relative amount of exhaust emissions of hydrocarbons, nitrogen oxides and four toxic air contaminants. Although the Jessup references do not disclose equations for predicting toxic air contaminants, the examiner is of the position that the method of blending hydrocarbon gasoline streams based on predictive equations of exhaust emissions is taught by the prior art.

**(11) Response to Argument**

Appellants argue that while the Jessup references disclose controlling certain properties of a gasoline fuel in order to lower emissions, the patents fail to disclose or suggest controlling the amount of sulfur such that it is less than 10 ppmw as now recited by amended claim 1. The Jessup references do not teach or mention the sulfur content of the gasoline blends. However, the examiner is of the position that since the California regulations for Phase 3 reformulated gasolines, which regulations began as a requirement for all gasolines sold in California on January 1, 2003, **require** a flat limit of 20 ppmw sulfur and **require** an average limit of 15 ppmw sulfur, it would have been obvious to the skilled gasoline formulator to limit the amount of sulfur in reformulated gasolines to this requirement. It is well known to the skilled gasoline formulator that the amount of sulfur in the product gasoline can be controlled by specifically choosing streams from a refinery which are low in sulfur for blending the gasoline. The examiner is of the position that since regulatory authorities such as the California Air Resources Board have focused on setting specifications for low emissions for reformulated gasolines, it would have been obvious to the skilled gasoline formulator to have lowered the amount of the contaminant sulfur in gasoline blends to even lower levels, such as 10 ppmw sulfur, due to the obvious impact upon the air we breathe and upon the environment in general.

Appellants argue that gasoline refiners would not, unless the benefits were sufficiently appreciated, further restrict and control the amount of sulfur to 10 ppmw, lower than that required by the current specifications of 15 ppmw average limit. This is not deemed to be persuasive of patentability of the claims because the trend appears to be to reduce as much as

possible the levels of the contaminant sulfur in gasolines sold in California. For example, for Phase 2 reformulated gasolines, required of all gasolines sold in California between June 1, 1996 and December 31, 2002, the flat limit for sulfur was 40 ppmw and the averaging limit was 30 ppmw. It is possible that Phase 4 regulations may soon exist which would require even lower levels of sulfur in all gasolines sold in California. Additionally, the examiner is of the position that there has been a long felt need to remove contaminants such as sulfur from automobile emissions evidenced by the fact that auto-induced contaminants have been known for 30 years or more to significantly pollute the atmosphere. See, for example, *Environmental Designs, Ltd. v. Union Oil Company of California*, 218 USPQ 865 (Fed. Cir. 1983), in which the Federal Circuit squarely confronted the specious argument that the problem of sulfur pollutants in the air was not truly a long felt need but one “artificially generated by clean air legislation”. The court responded by pointing out that merely because the “need” was suddenly “legislatively” recognized did not “militate” against its existence all along. Simply put,

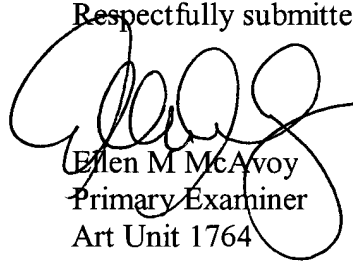
There was a long felt need to remove as much sulfur as possible from  
the air we breathe. (218 USPQ at 869)

In other words, if sulfur emissions were emitted to the atmosphere for a long period of time, there was concomitantly an ongoing need to remove it, and for a primal reason: so that people can breathe.

Art Unit: 1764

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

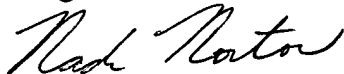



Ellen M. McAvoy  
Primary Examiner  
Art Unit 1764

EMcAvoy  
July 24, 2003

Conferees

E Joseph Gess Esq  
Burns Doane Swecker & Mathis LLP  
P O Box 1404  
Alexandria, VA 22313-1404

NADINE G. NORTON  
Supervisory ~~PRIMARY~~ EXAMINER  




Glenn Caldarola  
Supervisory Patent Examiner  
Technology Center 1700